



SEQUENCE LISTING

#16

RECEIVED
MAY 21 2003
TECH CENTER 1600/2800

<110> Jean-Louis Ruelle

<120> BASB019 Proteins and Genes from
Moraxella Catarrhalis Antigens, Antibodies, and Uses

<130> BM45311

<140> US 09/674,779

<141> 2001-01-03

<150> PCT/EP/99/03038

<151> 1999-05-03

<150> GB9809683.7

<151> 1998-05-06

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<213> Moraxella catarrhalis

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<213> Moraxella catarrhalis

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20 25 30
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35 40 45
Val Ala Pro Leu Val Asp Asn Asp Glu Thr Val Lys Ala Leu Ala Ser
50 55 60
Lys Leu Pro Ser Leu Val Tyr Phe Asp Phe Asp Ser Asp Glu Ile Lys

65 70 75 80
 Pro Gln Ala Ala Ala Ile Leu Asp Glu Gln Ala Gln Phe Leu Thr Thr
 85 90 95
 Asn Gln Thr Ala Arg Val Leu Val Ala Gly His Thr Asp Glu Arg Gly
 100 105 110
 Ser Arg Glu Tyr Asn Met Ser Leu Gly Glu Arg Arg Ala Val Ala Val
 115 120 125
 Arg Asn Tyr Leu Leu Gly Lys Gly Ile Asn Gln Ala Ser Val Glu Ile
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 Val Ala Pro Leu Val Asp Asn Asp Glu Thr Val Lys Ala Leu Ala Ser
 50 55 60
 Thr Leu Pro Ser Leu Val Tyr Phe Asp Phe Asp Ser Asp Glu Ile Lys
 65 70 75 80
 Pro Gln Ala Ala Ala Ile Leu Asp Glu Gln Ala Gln Phe Leu Thr Thr
 85 90 95
 Asn Gln Thr Ala Arg Val Leu Val Ala Gly His Thr Asp Glu Arg Gly
 100 105 110
 Ser Arg Glu Tyr Asn Met Ser Leu Gly Glu Arg Arg Ala Val Ala Val
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 1 5 10 15
 Leu Thr Phe Met Thr Gly Cys Ala Asn Lys Ser Thr Ser Gln Val Met
 20 25 30
 Val Ala Pro Asn Ala Pro Thr Gly Tyr Ala Gly Val Ile Tyr Thr Gly
 35 40 45
 Val Ala Pro Leu Val Asp Asn Asp Glu Thr Val Lys Ala Leu Ala Ser
 50 55 60
 Thr Leu Pro Ser Leu Val Tyr Phe Asp Phe Asp Ser Asp Glu Ile Lys
 65 70 75 80
 Pro Gln Ala Ala Ala Ile Leu Asp Glu Gln Ala Gln Phe Leu Thr Thr
 85 90 95
 Asn Gln Thr Ala Arg Val Leu Val Ala Gly His Thr Asp Glu Arg Gly
 100 105 110
 Ser Arg Glu Tyr Asn Met Ser Leu Gly Glu Arg Arg Ala Val Ala Val
 115 120 125
 Arg Asn Tyr Leu Leu Ser Lys Gly Ile Asn Gln Ala Ser Val Glu Ile
 130 135 140
 Ile Ser Phe Gly Glu Glu Arg Pro Ile Ala Phe Gly Thr Asn Glu Glu
 145 150 155 160
 Ala Trp Ser Gln Asn Arg Arg Ala Glu Leu Ser Tyr
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